Future Flight Design			
2009 Science Revised June 2010			
Learning Standards			
Washington Science Revised June 2010			
Grades 4-5			
Activity/Lesson	**State**	**Standards**	
Air Transportation Problem	WA	SCI.4-5.2.4-5 INQB.2	Work collaboratively with other students to carry out a controlled experiment, selecting appropriate tools and demonstrating safe and careful use of equipment.
Air Transportation Problem	WA	SCI.4-5.2.4-5 INQD.1	Gather, record, and organize data using appropriate units, tables, graphs, or maps.
Air Transportation Problem	WA	SCI.4-5.2.4-5 INQH.2	Communicate to peers the purpose, procedure, results, and conclusions of an investigation.
Air Transportation Problem	WA	SCI.4-5.3.4-5 APPA.1	Describe ways that people use technology to meet their needs and wants (e.g., text messages to communicate with friends, use bicycles or cars for transportation).
Air Transportation Problem	WA	SCI.4-5.3.4-5 APPF.1	Communicate the solution, results of any tests, and modifications persuasively, using oral, written, and/or pictorial representations of the process and product.
Air Transportation Problem	WA	SCI.4-5.4.4-5 LS3B.1	Communicate that plants and animals inherit many characteristics (e.g., color of a flower or number of limbs at birth) from the parents of the plant or animal.
Aircraft Design Problem	WA	SCI.4-5.2.4-5 INQF.1	Create a simple model to represent an event, system, or process.
Aircraft Design Problem	WA	SCI.4-5.2.4-5 INQF.2	Use the model to learn something about the event, system, or process.
Aircraft Design Problem	WA	SCI.4-5.3.4-5 APPE.1	Use suitable tools, techniques, and materials to make a drawing or build a model or prototype of the proposed design.
Aircraft Design Problem	WA	SCI.4-5.3.4-5 APPE.2	Test the solution to see how well that solution solves the problem. Modify the design, if necessary.
Aircraft Design Problem	WA	SCI.4-5.4.4-5 PS1A.1	Use a spring scale to measure the weights of several objects accurately. Explain that the weight of an object is a measure of the force of gravity on the object. Record the measurements in a table.
Aircraft Design Problem	WA	SCI.4-5.4.4-5 PS1B.1	Measure the distance that an object travels in a given interval of time and compare it with the distance that another object moved in the same interval of time to determine which is fastest.
Aircraft Design Problem	WA	SCI.4-5.4.4-5 PS3A.1	Identify different forms of energy (e.g., heat, light, sound, motion, electricity) in a system.

Future Flight Design			
2009 Science Revised June 2010			
Learning Standards			
Washington Science Revised June 2010			
Grades 6-8			
Activity/Lesson	**State**	**Standards**	
Air Transportation Problem	WA	SCI.6-8.2.6-8 INQB.3	Work collaboratively with other students to carry out the investigations.
Air Transportation Problem	WA	SCI.6-8.2.6-8 INQC.1	Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.
Air Transportation Problem	WA	SCI.6-8.2.6-8 INQC.2	Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.
Air Transportation Problem	WA	SCI.6-8.2.6-8 INQC.3	Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.
Air Transportation Problem	WA	SCI.6-8.3.6-8 APPE.1	Collaborate with other students to generate creative solutions to a problem, and apply methods for making trade-offs to choose the best solution.
Aircraft Design Problem	WA	SCI.6-8.1.6-8 SYSC.1	Give an example of how output of matter or energy from a system can become input for another system (e.g., household waste goes to a landfill).
Aircraft Design Problem	WA	SCI.6-8.1.6-8 SYSD.1	Given a description of a system, analyze and defend whether it is open or closed.
Aircraft Design Problem	WA	SCI.6-8.2.6-8 INQE.1	Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.
Aircraft Design Problem	WA	SCI.6-8.3.6-8 APPD.1	Define a problem that can be solved by technological design and identify criteria for success.
Aircraft Design Problem	WA	SCI.6-8.3.6-8 APPF.2	Present the recommended design using models or drawings and an engaging presentation.
Aircraft Design Problem	WA	SCI.6-8.4.6-8 PS1A.2	Illustrate the motion of an object using a graph, or infer the motion of an object from a graph of the object's position vs. time or speed vs. time.
Aircraft Design Problem	WA	SCI.6-8.4.6-8 PS1B.1	Demonstrate and explain the frictional force acting on an object with the use of a physical model.
Aircraft Design Problem	WA	SCI.6-8.4.6-8 PS1C.1	Determine whether forces on an object are balanced or unbalanced and justify with observational evidence.

Aircraft Design Problem	WA	SCI.6-8.4.6-8 PS1C.2	Given a description of forces on an object, predict the object's motion.